



OCT 2014 | ISSUE 5

*Stand out*

## The LexiMinds' Experience

How not Listening to Your Users, Creates a Better App

## IRIS7

iRIS Reengineered

## A BETTER CICTS

Sumbangsaran Di Negeri Bawah Bayu



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# DARI MEJA PENGARAH

السلام عليكم ورحمة الله وبركاته

Salam sejahtera dan salam 1 UNIMAS

Syukur Alhamdulillah, kita semakin hampir kepada penghujung tahun 2014. Ia memberi peluang kepada saya untuk mengimbuu kembali beberapa inisiatif dan perubahan baharu melangkaui kebiasaan yang telah dilaksanakan dalam usaha kita bersama untuk memartabatkan kualiti perkhidmatan ICT. Tag-it kali ini akan memaparkan beberapa inisiatif yang telah dilaksanakan sepanjang 2014.

Terima kasih kepada UNIMAS khususnya kepada Naib Canselor yang sejak dari awal melihat bahawa peranan ICT sangat signifikan dalam menyokong aktiviti pengajaran-pembelajaran, penyellidikan dan pengurusan. Justeru itu, perkara-perkara berkaitan dengan ICT terus diberi perhatian dan keutamaan.

Sebagai peneraju kecemerlangan perkhidmatan ICT ke arah merealisasikan aspirasi UNIMAS, CICTS berusaha sehabis baik untuk memenuhi jangkaan pengguna dan Pengurusan UNIMAS. Walau bagaimanapun adakalanya apa yang dirancang tidak dapat dilaksanakan sepenuhnya atas kekangan sumber dan masa ekoran wujudnya keperluan di luar jangkaan. Ungkapan Tun Dr. Mahathir Mohamad yang pernah dikongsi oleh Naib Canselor semasa Sesi Perkongsian Aspirasi dan Halatuju UNIMAS menjadi kekuatan dan semangat untuk kami terus cemerlang dan berani mencuba.

*"We need to forecast the future; have a Vision.  
The end product may not always be certain, but  
we must start somewhere and we must always,  
always, be brave"*

Usaha ke arah pemantapan khidmat ICT akan diteruskan dengan lebih agresif lagi pada 2015 nanti. Semoga segala ikhtiar akan dipermudahkan dengan izin Allah SWT.

Selamat membaca dan semoga mendapat manfaat daripadanya!

*Harun Maksom*



# FROM THE EDITOR

Software designers have always had to contend with a balancing act when it comes to designing their applications. Does function take priority over form? Should code be practical or pretty?

But times have change.

The user's experience with the app will determine whether an application becomes a box-office star or a bottom of the barrel flop.

Such demands, for good software designs, prompted industry heavy weights such as Apple and Google to release their design philosophies to the development community.

Apple's iOS Human Interface Guidelines and Google's Material Design are guides that sought to bring order to the chaos and introduce software design that stands out. One can argue that in the end, both Apple and Google are in fact controlling how software is designed, thus stifling the whole creative process.

In this issue, we take a peek at several initiatives that took the path to stand out above their peers. We look at how a lecturer took the chance to develop his own award winning smart-phone app, at how a team revamped a system for researchers, bringing it up to date and to your smart-device and we look at people making a decision to try something new and to relish the experience gained.

We all have the chance to stand out. Have you taken the chance to stand out?

*Maclean Patrick*

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## A BETTER CICTS

*Sumbangsaran Di Negeri Bawah Bayu*





## UNIMAS On The Go Update

Aplikasi mobile UNIMAS yang pertama, *UNIMAS On The Go* telah memperkenalkan ciri tambahan baharu iaitu *Travel Claim* dan *University Academic Calendar*. *Travel Claim* akan memberikan makluman mengenai status *Travel Claim* kepada staf yang telah menghantar permohonan tuntutan elaun perjalanan. Manakala *University Academic Calendar* pula akan memaparkan jadual waktu setiap pelajar dan boleh dimasukkan ke dalam kalendar pelajar itu sendiri.

## Program Sangkutan Skim F

Program Sangkutan Skim F buat julung kalinya telah diadakan di Pusat Komputer, Universiti Teknikal Melaka mulai 25 Ogos 2014 hingga 29 Ogos 2014. Program selama lima hari ini disertai oleh lima orang staf dari Skim F Universiti Malaysia Sarawak yang terdiri daripada dua orang Pegawai Teknologi Maklumat Gred F41, dua orang Penolong Pegawai Teknologi Maklumat Gred F29 dan seorang Juruteknik Komputer Kanan FT22. Program ini memberikan fokus terhadap skop Pentadbiran, Infostruktur, Infrastruktur serta pengendalian Projek Khas di Pusat Komputer termasuk proses kerja di Perpustakaan.

## Eprints

Officially in use, starting October 2014, the open source solution - EPrints will serve the Institutional Repository (IR) needs of UNIMAS replacing the previous system - Symposia. A joint collaborative effort by the Centre for Academic Information Services (CAIS) and the Centre for Information and Communication Technology Services (CICTS) helped bring the IR project to completion.



## Single Sign - On

With various services already available for users via a web-interface, the Centre for Information and Communication Technology Services (CICTS) has embarked on a Single Sign-On (SSO). SSO will allow users to login once and have their details shared across all participating systems within the university network. The project is scheduled to be completed in 2015.

## ISMS: 1st Surveillance Audit

Pusat Khidmat Teknologi Maklumat dan Komunikasi telah menjalani Audit Pematuhan Pensijilan Sistem Pengurusan Keselamatan Maklumat MS ISO 27001:2005 & MS ISO/IEC 27001:2007 (*Information Security Management System* [ISMS]) bagi Pengurusan Pusat Data UNIMAS pada 21 dan 22 Ogos 2014 yang lalu. Pensijilan ini merangkumi perkakasan, perisian sistem, pangkalan data dan sistem operasi untuk aplikasi kritikal. Hasil auditan kali ini sekali lagi mengekalkan rekod tanpa NCR dengan beberapa peluang penambahbaikan.

## Tag-it dalam Google Books

Sempena keluaran Isu ke 4 Tag-it, kesemua isu Tag-it telah dimuat naik ke Google Books. Dengan cara ini, pembaca boleh membaca Tag-it melalui aplikasi Google Books yang boleh dimuat turun dari Google Play Store.

HOW **NOT**  
LISTENING  
TO  
OUR  
USE  
RS

# CREATES A BETTER APP

*When I uploaded my first webpage onto the infamous Geocities back in 1997, I was probably the first child in my hometown to own a virtual space on the World Wide Web.*

---



# THE LEXIMINDS' EXPE- RIENCE

By Chuah Kee Man

Despite being a language educator, I possess a strong interest in ICT, learning most of the programming and IT knowledge on my own with the help of readily-available resources online. When I uploaded my first webpage onto the infamous Geocities back in 1997, I was probably the first child in my hometown to own a virtual space on the World Wide Web. The sense of excitement was so profound that I began promoting it to my friends and family members just to get some feedback

on it. But there was a problem. More than half of them did not have Internet access and they could not even imagine how my simple webpage looked like. Those who managed to access my webpage gave good comments, simply because it was done by a young kid and they did not even bother to offer advice for improvements.

Unsurprisingly, the same situation happened again when I first mooted the idea of developing a mobile application

that could potentially change the way language learners learn vocabulary. The idea came to me while I was explaining the meaning of a word to my student through text messaging right before I went to sleep at about midnight. That eureka moment caused me to stay awake for at least a few more hours as I started drawing mind maps and flow charts on my notepad.

Falling back on my academia and



research experience, I initiated the LexiMinds' journey in a structured manner. The next morning, I asked about 5 of my students to stay back after class and I conducted a focus group interview, which is one of the so-called "must-dos" in gathering user inputs particularly concerning usability. However, the session took less than 10 minutes not because my students did not give any feedback, but because I was overwhelmed with the countless comments given that I decided to end the interview.

In less than 10 minutes, I had a list of at least 60 user expectations on what they wanted or needed in a vocabulary learning app. More than half of the expectations were not even close to what I wanted to do, simply because the students were drawing their experiences from the existing apps that they had used. Some cited existing apps as the benchmark to which I needed to follow. It was at that moment, I remembered the famous quote from Steve Jobs, "It's not the consumers' job to know what they want". True enough.

Users would not have known they can navigate easily using GPS or engage in group messaging until such things existed. And so, I stopped listening to users. But I observed what they regularly do. When they do not know a word, chances are they will either ask a friend or look for a visual representation of it. Hence, LexiMinds is created to fit this habit, making vocabulary learning more sociable and visualized.

In order to allow creative and innovative designing and development of application, we need to stop listening to the users and start sampling and scrutinize their experiences. Users do not really care how an app works, but once they find a way to use it, they are most likely to stick to it. So, as a designer or developer, we should not pay too much attention to the nasty complaints we get for our application, instead pay attention on how the users are using the application and then try to improve on it.

But most importantly, we need to set in our mind that the app is never really a final version. Constant fine-tuning is a must to create an app that enhances user experience and ultimately their satisfaction.

With the support of my team members, the initial versions of LexiMinds have been tested by a limited group of students and showcased in several exhibitions. The feedback was mind-blowing and it spurred us to do better, despite limited funding and resources. Although we are still tweaking the app before releasing it publicly, I am truly optimistic that it will generate students' interests in learning vocabulary because LexiMinds actually creates a whole new vocabulary learning experience, and we would like all students to be part of this wonderful journey.

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**“It’s not the  
consumers’ job  
to know what  
they want.”**

- Steve Jobs

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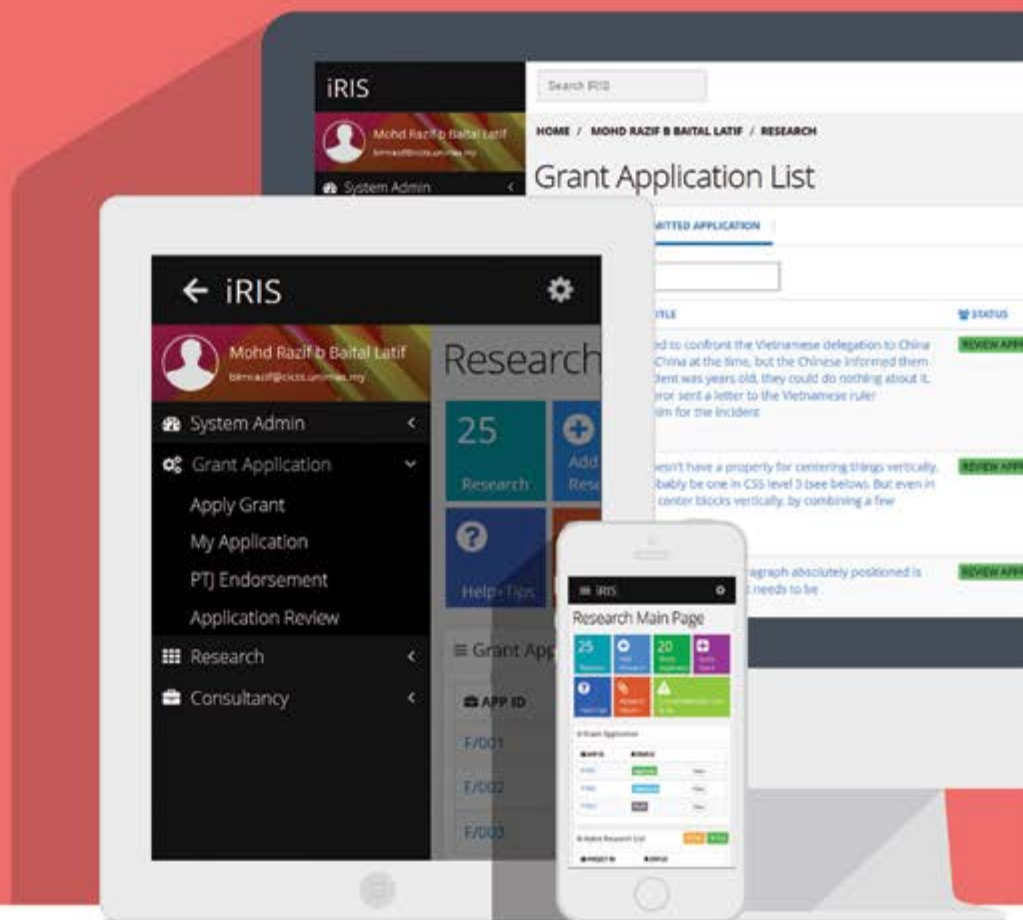




# IRIS7

## IRIS REENGINEERED

By Mohd Razif Baital Latif



The UNIMAS Integrated Research Information System or iRIS is now version 7.

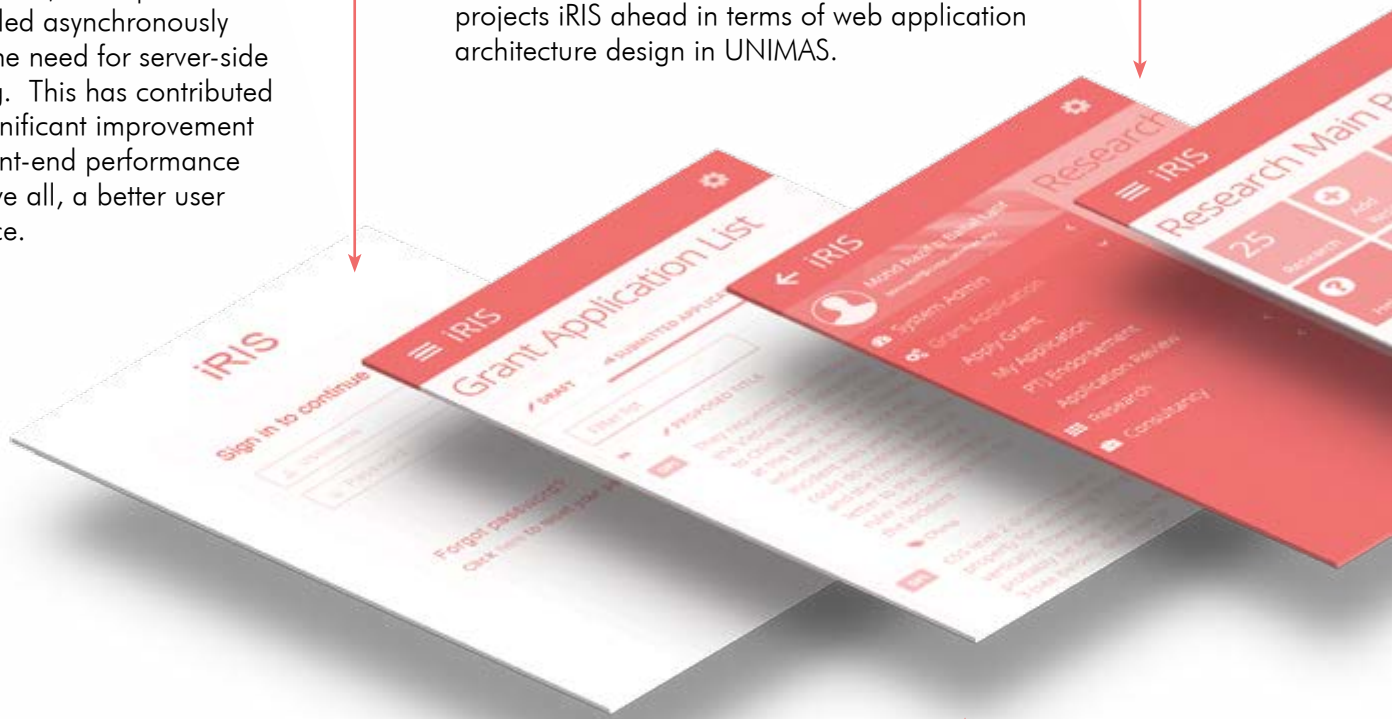
The seventh iteration of the research gateway has undergone a reengineering process, where the previous version was totally overhauled. By incorporating the state-of-the-art web technologies, iRIS can now provide users' access to its system via any mobile devices. In addition to this, iRIS now refers to the UNIMAS Portal for its authentication process. This allows users' access to iRIS using their existing UNIMAS portal login details.

## RESTful Web Service

The back-end on the other hand, adapts the Representational State Transfer (REST) architectural style via the use of Java, Spring MVC framework and Java Persistent API. This provides the ease of integrating with any 3rd party applications. The integration across systems occur at the application level through the HTTP request without the need to access the databases. This is another feature that projects iRIS ahead in terms of web application architecture design in UNIMAS.

## Single Page Application

At the front-end, iRIS is a Single Page Application developed using HTML5, AngularJS and Bootstrap. By leveraging on AngularJS router for URL management, all requests are handled asynchronously without the need for server-side rendering. This has contributed to the significant improvement of the front-end performance and above all, a better user experience.



## Responsive Web Design Approach

Developed using the Responsive Web Design approach via Bootstrap, the user interface is available in four (4) modes (depending on the screen size, and user setting);

- i. Mobile Mode: optimised for small screen device;
- ii. Normal Mode: optimised for normal desktop/laptop/tablet;
- iii. Presentation Mode: optimised for the projection (view during presentation with projector)
- iv. Hi-Contrast Mode: this can be enabled for visually challenged users.

In addition, iRIS also provides users with a finger-friendly user interface.

Features available



## Databases Interoperability

iRIS uses an Oracle Database. Owing to the abstraction in database query (JPQL) and the persistence through Object Relational Mapping (ORM), the system is expected to work with other major relational database management systems.



in iRISv6 and iRISv7. Subsequently, iRISv6 will be reengineered and incorporated as iRISv7.

**iRISv7**

### Grant Application (2014)

For all of the internal grant application process including:

- Grant application planning
- Department endorsement process
- Expert Panel Review process
- JKPI approval process

In IRIS7, the information will only be input once. As the information goes through multiple review process (department level, Expert Panel, JKPI), the data collected will be more accurate.

**iRISv6**

#### Research Module

Research info management

#### Seminar Module

Seminar info management

#### Publication module

Publication info management

#### Research Report

Progress and Final report submission

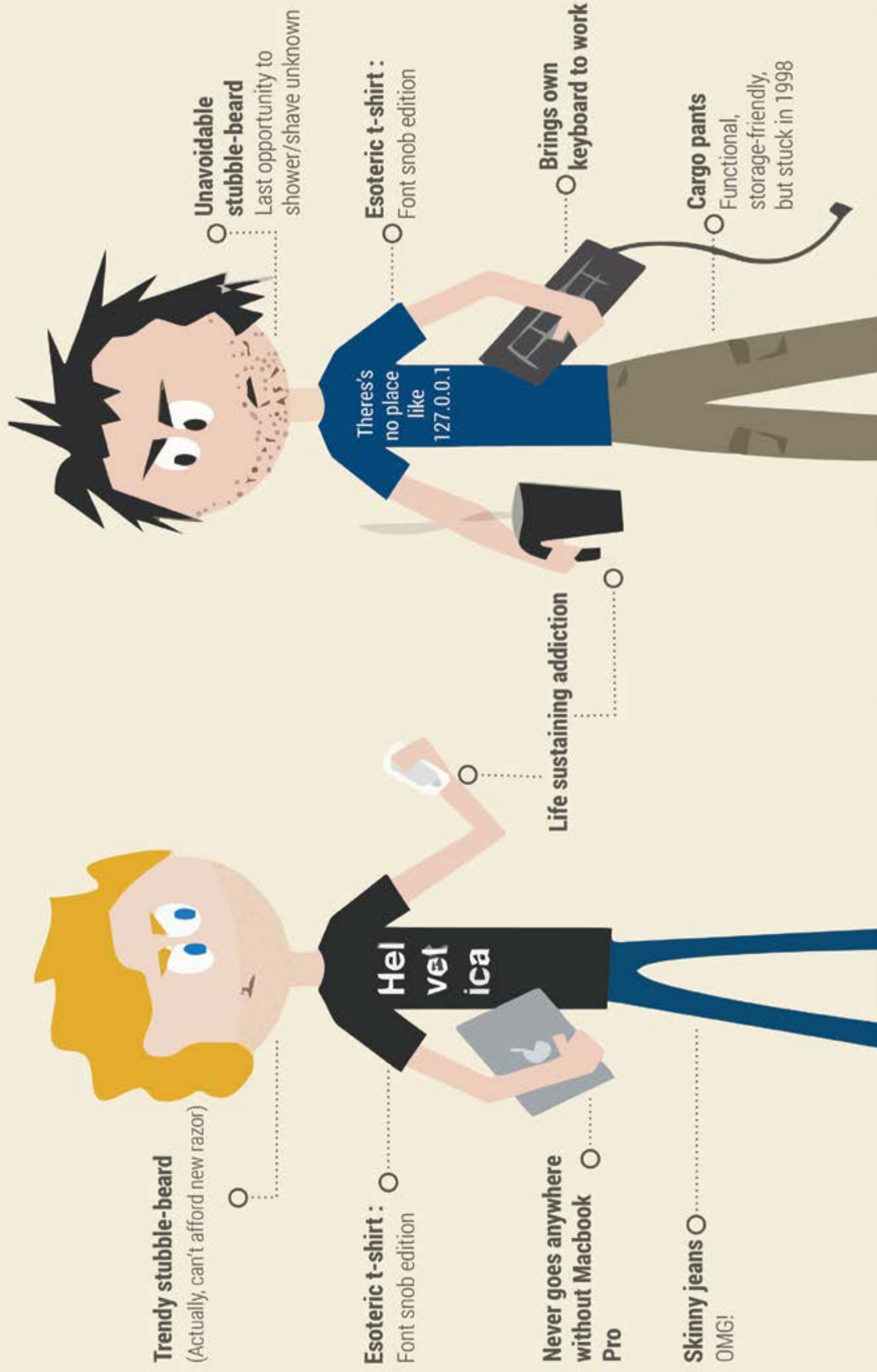
### Research Monitoring (2015)

For grant monitoring:

- Project (activities & milestones) management
- HCD (Human Capital Development) info management
- Output(Publication) management
- Research progress update
- Progress Report Submission

As the research progresses, the researcher will be able to update their information periodically into the system. At this stage, IRIS7 is expected to be their project monitoring tools. These information will be used for research progress report submission, with just a click away.

# WEB DESIGNERS VS WEB DEVELOPERS







**What Web  
Designers are  
afraid of**



**What Web  
Programmers  
are afraid of**



\*Yes, we know some designers and programmers are female. But the statement stands!



# The UX Approach

## Using Emotions To Design Software

By Maclean Patrick Sibat

It was a cognitive science researcher, Dr Donald Norman, who coined the term “user experience” or simply UX that defines how a person feels when interacting with a computer system. UX is not limited to the interface of a system, but crosses over into sub-systems and also the processes within a system. Any point of contact with the user can be scrutinised from the spotlight of UX, for at different points of contact, the user may and will feel differently towards the system.

And that’s the main idea for with UX. UX deals with how a user feels towards a system. Yet feelings are ambiguous and vague, and never ever a fix point.

Yet, can a software developer design their system based on how users feel towards their system?

Firstly, a distinction between UX and the software development process has to be made. UX deals with the user’s perception and reactions at using the system and in no way should it dictate the development process. The user must



be able to use a finish system before gauging their own reactions towards it. The reactions would then be gathered to improve or revamp the system. There is no better place for this to happen than in the prototyping phase of the systems development. And for this to happen, a prototype needs to be present.

The point of contact between UX and the software development process is therefore the prototype.

Thus, the goal for any system developer is to come up with a prototype rather than to aim for version one of a finish system. But having UX meet at the prototyping stage lengthens the development process, and this time, is what most developers do not have.

Secondly, feedback from users is critical. Not merely to know whether a system works or does not work, but also to ask why they think a system works or does not work. Therefore user surveys should capture, remarks on how the user feels towards the system. Developers may not be ready to hear honest and frank responses to their systems. Who could?

UX is not measuring the usability of the system. A system may work, may function perfectly, may accomplish the task as required by the users but it may never be liked by the user.

Painful as it may be to the developer, honest feedback is crucial in applying the principles of UX towards their products.

Thirdly, the interface design of the system takes top priority within the context of UX. A well designed interface creates a pleasurable experience for the user and helps elevate the likability factor of

the system. A programmer may now have to juggle the task of being a designer with that of a developer, a role many programmers are not fond of. It requires artistic flair, an active imagination and the capability to express oneself in a visible nature – all contrary to the image of a programmer, who only concerns him/herself to binary numbers and logical algorithms.

No longer can one encapsulate code with a template. Rather, the template now drives the code. Design drives function. This is a leap in mind-set that a few developers are not willing to make, yet it is a required paradigm shift in order to properly apply UX to software development.

We would be foolish to ignore the importance of UX in software development. The demands by the users for simple and elegant applications that creates a sense of joy in using them cannot be ignored. The emotional reactions of users are now part of software development. Most importantly, the emotional side-effects of using a well-designed application cements brand loyalty.

Industry heavy weights such as Apple and Google have known this for a long time.

Both the Apple iOS Human Interface Guidelines and Google's Material Design guide books are excellent reading for programmers who wish to apply UX into their applications.

# “Do we need a system?”

By Assoc Prof Dr Mohd Ibrahim Safawi b Mohd Zain

One of the UNIMAS Strategic Review Initiatives is to promote UNIMAS as a paperless organization. Most of our processes are intended to be done through various online systems. As such, since 2008 till 2015 UNIMAS should be actively launching a lot of online systems.

A standard development period for any ICT system should not be more than six months. One common problem that often causes extension of development time is uncertainty on the part of the requesting party as to what they want from the system.

The rule of thumb is that as long as the system follows the criteria stated in the User Requirement Study (URS) then all should be well. More often than not, the system owner deviates from the original intent and makes significant changes to the system needs; without proper consultation nor study. This state of indecisiveness must be avoided at all times.

In the previous issue of Tag-it, I wrote about the need for signing off the User Requirement Study (URS) between the System Owner (user of the application) and the System Developer. For the benefit of those who are not familiar with the process of applying for the development of an online application system, the URS is a brief description of what the user

requires the system to do.

This technical document states how the system should be, who are involve, how it will function and a few other items. The Strategic Planning and Quality Management Centre (SQC) deem this signing off activity as a very critical process because it signifies the agreement that both F/I/C/D and CICTS understand the nature of the system to be developed. Taking the construction industry as an analogy, the URS is like the contract agreement signed between the designer and contractor.

Any party that requires the development of a system must be able to DESIGN the requirement comprehensively. In layman term, they must know exactly what they want. Being the owner of the system, they are responsible to state down their requirements from the beginning of the process till the end product expected.

**They must reflect and brainstorm the very basic question "Do we need the system?"**

Hence, every effort must be made to seriously ponder and ensure that the system requested will be useful and beneficial to UNIMAS. What must be avoided is the fact that a system is requested based on an idea yet it has not been fully evaluated nor are there standard operating procedures to accommodate or support the new system.

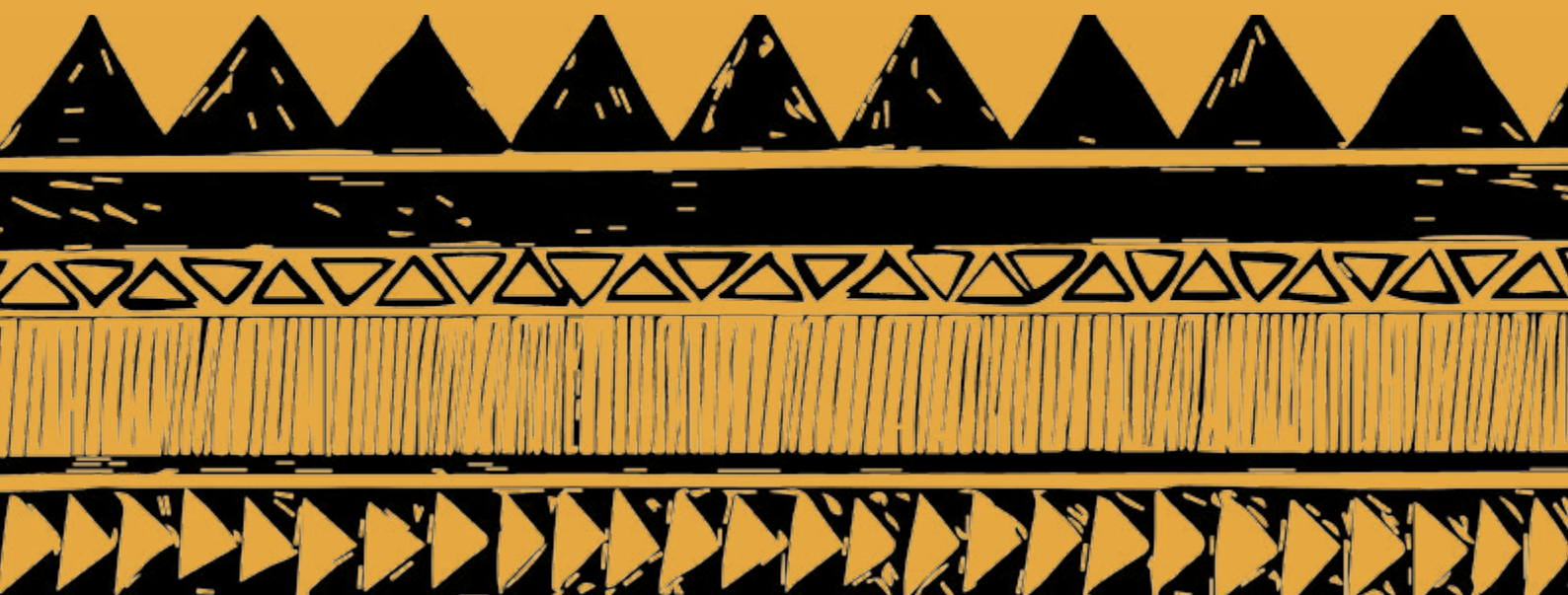
Having decided that a system will seriously increase the efficiency and effectiveness of the university, the next practical thing to do is to design the actual system.

The system design process should be done even before engaging the team from CICTS. The process owner must be well versed with their requirements and standard operating procedures. They must identify the parties involved in their work processes, be it students or academic staff or clerks or outside parties and how their roles connect with one another.

The subsequent activity will then be to finalise the User Requirement Study. It must be emphatically mentioned, that this session must start with the requesting party presenting their needs to the ICT centre.

This session between the requesting party and CICTS would involve finalizing the layout design, the level of accessibility, integration with existing applications, security measures, project time-line and prototype test. By the end of this process, both parties should sign the User Requirement Study, which is a document of intent containing important details of the intended system.

By highlighting the above issue, SQC expects that the success and completion rate of the various UNIMAS online system development will be enhanced and that the university would achieve its target of becoming a paperless organization.





# <? EASY PHP ORM ACTIVE- RECORD; ?>

By Mohd Razif Baital Latif

// PHP-activerecord is an open source Object Relational Mapping (ORM) library based on the ActiveRecord pattern (an architectural pattern found in software that stores its data in relational databases). It aims to massively simplify the interactions with your database and eliminate the chore of hand written SQL for common operations. In this regards, if you are not using any framework as your development tool, perhaps, php-activerecord is an alternative. Your code will be more organised and it will be compatible with a wide range of database (eg. mysql, pgsql, sqlite, oci).

01.

Download a copy of ACTIVERECORD from <http://www.phpactiverecord.org>

02.

Include the library and define your connection (preferably abstracted into a config file bootstrapped upon start):

```
<?php
require_once 'php-activerecord/ActiveRecord.php';
ActiveRecord\Config::initialize(function($cfg){
    $cfg->set_model_directory('.');
    $cfg->set_connections(array('development'=>'mysql://
username:password@localhost/database_name'));
});
?>
```

03.

Create entity class (User.php), note that the model class name is the singular representation of the table name. In case you are working with the legacy database with predefined naming convention, you can always override the table name definition through *\$table\_name* variable.

```
<?php
class User extends ActiveRecord\Model{
    // static $table_name = 'pengguna'; override example
}
?>
```

04.

Then, you can use your entity class for database manipulation.

```
<?php
// create
$user = User::create(array('name'=>'Razif', 'address'=>'Kuching'));

// read
$user = User::find_by_address('Kuching');

// update
$user->name = 'Mohd Razif';
$user->save();

//delete
$user->delete();
?>
```





Tag-it OCT 2014

# A Better cicis

Sumbangsaran Di Negeri Bawah Bayu  
By Maclean Patrick Sibat





Berbekalkan tema “*A Better CICTS*”, seramai empat puluh lima orang pegawai daripada Pusat Khidmat Teknologi Maklumat dan Komunikasi (PKTMK), Universiti Malaysia Sarawak telah berkampung di Negeri Di Bawah Bayu – Sabah dari 25 hingga 28 September 2014.

Pada tahun ini, PKTMK berpeluang menghabiskan masa bersama para pegawai ICT daripada Jabatan Teknologi Maklumat dan Komunikasi, Universiti Malaysia Sabah.

Pada hari Jumaat, pembentangan empat kumpulan sumbangsaran telah diadakan di Pulau Manukan berasaskan topik perbincangan yang diberi seperti *A Better Way to Communicate*, *A Better Workplace*, *A Better Way of Doing Things* dan *A Better Way to Manage, Administer and Govern*.

Sumbangsaran tahun ini turut menampilkan cabaran baharu buat peserta. Pertandingan “selfie” berkumpulan buat julung kalinya diadakan pada hari Sabtu, bertemakan “*Come With Me on An Adventure*”.

Pertandingan “selfie” kumpulan ini diadakan sekitar Taman Kinabalu dan Poring Hot Spring. Setiap kumpulan perlu memuat naik gambar ke laman Facebook - Centre for Information & Communication Technology Services dan kumpulan yang memperolehi jumlah “like” tertinggi akan bergelar juara.

Kumpulan MaduKelulut memperoleh jumlah “like” tertinggi dan dinobatkan sebagai juara, diikuti oleh Kumpulan Running 12, Kumpulan Lipan Bara dan Kumpulan Kilauan Emas.

- |   |   |   |
|---|---|---|
| { | “Selfie yang paling banyak saya ambil dalam seumur hidup saya dalam masa 1 hari!”   | } |
| { | “Tired..but it was really great and everyone is having fun!”  | } |
| { | “Trip ke KK berjaya merapatkan hubungan silaturrahim sesama rakan sekerja. Dapat lebih kenal peribadi masing-masing, menaikkan semangat bekerjasama antara rakan-rakan melalui aktiviti berkumpul dan santai dan juga mencetuskan idea baru dalam memperbaiki suasana persekitaran tempat bekerja..”                          | } |
| { | “Syabas dan tahniah! Sumbangsaran CICTS yang pertama kalinya diadakan di luar Sarawak iaitu Sabah merupakan satu kejayaan yang besar dan pujian harus diberikan kepada urusetia dan ahli yang terlibat. Yang pastinya, setiap aktiviti sumbangsaran yang berlangsung di Sabah telah memberikan satu pengalaman yang manis...” | } |

In memory of

# MH 17

## *Passengers & crew*



ANTHONY SAMY/MABEL MS - JIEE/TAMBI BIN - GAZALEE/ARIZA BINTI - TAMBI/MUHAMMAD AFIF BIN -  
BINTAMBI/MUHAMMAD AFRUZ - BINTAMBI/MUHAMMAD AFZAL - BINTITAMBI/MARSHA AZMEENA - DEWA/  
SHALIZA ZAINI - FOO/MING LEE - GOES/KAELAMAYAJAY - JRETNAM/SUBASHNI - KARNAILSINGH/  
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HASNI HARDI BIN - PUNJABI/KAUSHALYA JAIRAMDAS - SITIAMIRAH/BINTIPARAWIRA - SIVAGNANAM/MATTHEW  
EZEKIAL - SIVAGNANAM/PAUL RAJASINGAM - TAN/SIEW POH - TEOH/ELAINE - WAN AMRAN BIN WAN  
HUSSIN - CHOO JIN LEONG, EUGENE - AHMAD HAKIMI BIN HANAPI - MUHAMAD FIRDAUS BIN ABDUL  
RAHIM - MOHD GHAFAR BIN ABU BAKAR - DORA SHAHILA BINTI KASSIM - DORA SHAHILA BINTI KASSIM  
- AZRINA BINTI YAKOB - LEE HUI PIN - MASTURA BINTI MUSTAFA - CHONG YEE PHENG - SHAIKH MOHD  
NOOR BIN MAHMOOD - SANJID SINGH SANDHU - HAMFAZLIN SHAM BINTI MOHAMEDARIFIN - NUR  
SHAZANA BINTI MOHAMED SALLEH - ANGELINE PREMILA RAJANDARAN



# How To Install UNIMAS On The Go

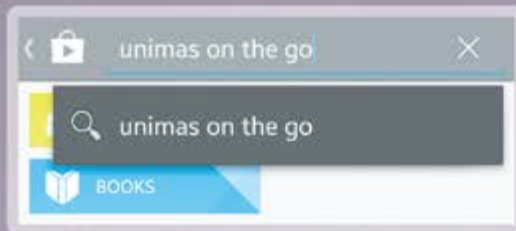
1

on your android phone, open the Play Store app..



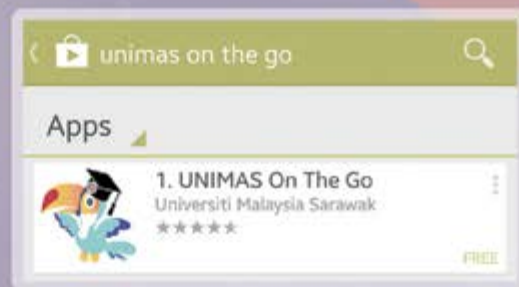
2

Search for UNIMAS on The Go app using the top search bar..



3

Select and tap the UNIMAS on The Go app!



4



Then , tap the install button..

5

once installation has finished, open the app & login using your UNIMAS Portal account.

Now, you are ready to rock!!

